

ABSTRACT

The possibility of shorting between a spin valve and its underlying magnetic shield layer can be largely eliminated by choosing the bottom spin valve structure. However, doing so causes the hard longitudinal bias that is standard for all such devices to degrade. The present invention overcomes this problem by inserting a thin NiCr, Ni, Fe, or Cr layer between the antiferromagnetic layer and the longitudinal bias layers. This provides a smoother surface for the bias layers to be deposited onto, thereby removing structural distortions to the longitudinal bias layer that would otherwise be present. A process for manufacturing the structure is also described.